

Date: Wednesday, 12/11/2008 1:38:22 PM  
 User: Julie Dawson

## Process Sheet

<b>Customer</b>	: CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b>	: HINGE BRACKET
<b>Job Number</b>	: 43364		
<b>Estimate Number</b>	: 10348		
<b>P.O. Number</b>	:	<b>Part Number</b>	: D28581
<b>This Issue</b>	: 12/11/2008	<b>S.O. No.</b>	:
<b>Prsht Rev.</b>	: NC	<b>Drawing Number</b>	: D2858 REV B
<b>First Issue</b>	: 11	<b>Project Number</b>	: N/A
<b>Previous Run</b>	: 39787	<b>Drawing Revision</b>	: B
<b>Written By</b>	:	<b>Material</b>	:
<b>Checked &amp; Approved By</b>	: <u>0008.11.12</u>	<b>Due Date</b>	: 28/11/2008
<b>Comment</b>	: Est C 00.06.22 Removed P/O for powder coat EC	<b>Qty:</b>	20
		<b>Um:</b>	Each

## Additional Product

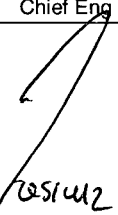
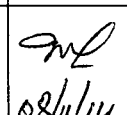
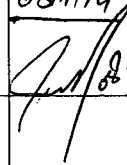
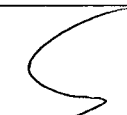
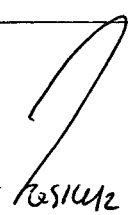

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	M6061T6B1500X01250	6061-T6 Bar 1.50 x 1.25
<b>Comment:</b> Qty.: 0.1767 f(s)/Unit Total : 1.7672 f(s) Material: 1.50" X 1.25" 6061-T6 (QQ-A-225/8 or QQ-A-250/11 or QQ-A-200/8) (M6061T6B15001250) Batch <u>M167461</u>		
		<u>ml 08/11/13</u> (24)
2.0	BAND SAW	BAND SAW
<b>Comment:</b> BAND SAW Cut blanks 6.02" Note: 1 Blank Makes 3 Parts		
		<u>ml 08/11/13</u> (24)
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
<b>Comment:</b> HAAS CNC VERTICAL MACHINING #1 1-Machine per folio D2858- 2-Deburr as per Dwg D2858000		
		<u>ml 08/11/13</u> (PTO)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2858-1 PAR #: N/A Fault Category: Prod. Eng. Record NCR: Yes No DQA: lt Date: 08.11.20  
 (D3SD-588-041/011)  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>43364</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/11/14	2	<sup>3</sup> part too small - the dim. 1.47" too small of .019" R.C. program error tool go too deep.	 08/11/12	- scrap and destroy no replace - fix/modify the program.	 08/11/14  08/11/16	 08/11/17	 08/11/12	 08/11/17

NOTE: Date & initial all entries

Date: Wednesday, 12/11/2008 1:38:22 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HINGE BRACKET

Job Number: 43364

Part Number: D28581

Job Number:



Seq. #: Machine Or Operation: Description :

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

*one 08/11/14*

*(21)*

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

*J.F. 08/11/15*

*(21)*

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.3

*M-L 08/11/17*

*(21X)*

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Gloss White (Ref. 4.3.5.1) per Dart QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*1:30*  
*3200°F*  
*2:30*

*M-L 08/11/17*

*(21X)*

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

*08-11-17*

*(12X)*

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

*ST51*

*SS 08/11/18*

*(21)*

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/11/19*

*SS*

Job Completion



*me 08-11-18*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 43364
<b>Description:</b> Hinge Bracket		<b>Part Number:</b> D2858-1
<b>Inspection Dwg:</b> D2858	<b>Rev:</b> B	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.171	+0.005/-0.001	Ø.173	/			
Ø0.400	+0.006/-0.001	Ø.400	/			
R0.125	+/-0.010	R.125	/			
0.328	+/-0.010	.327	/			
0.820	+/-0.005	.819	/			
1.476	+/-0.010	1.477	/			
0.342	+/-0.010	.343	/			
0.875	+/-0.005	.873	/			
1.56	+/-0.030	1.562	/			
0.147	+/-0.010	.147	/			
0.717	+/-0.010	.713	/			
0.697	+/-0.010	.690	/			
0.229	+/-0.010	.233	/			
R0.125	+/-0.010	R.125	/			
R0.063	+/-0.010	R.063	/			
0.063	+/-0.010	.066	/			
0.126	+/-0.010	.127	/			
0.630	+/-0.010	.630	/			
R0.354	+/-0.010	R.354	/			
0.965	+/-0.010	.966	/			
Ø0.166	+0.005/-0.001	Ø.167	/			
R0.125	+/-0.010	R.125	/			
32.7°	+/-0.5°	32.7°	/			

<b>Measured by:</b> [Signature]	<b>Audited by:</b> JF.	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 08/11/14	<b>Date:</b> 08/11/15	<b>Date:</b>	N/A

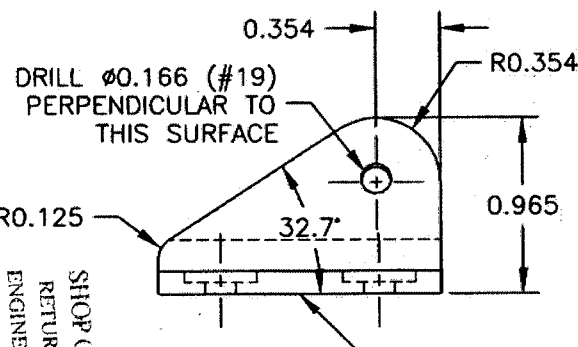
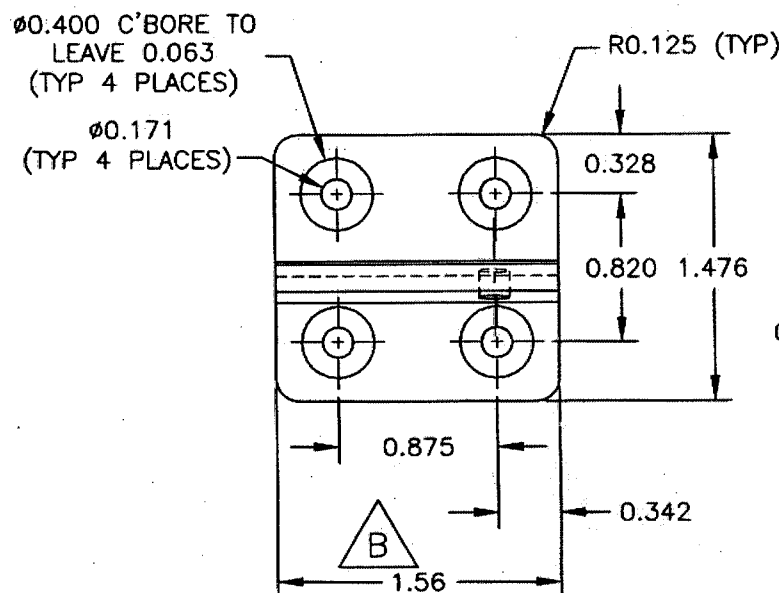
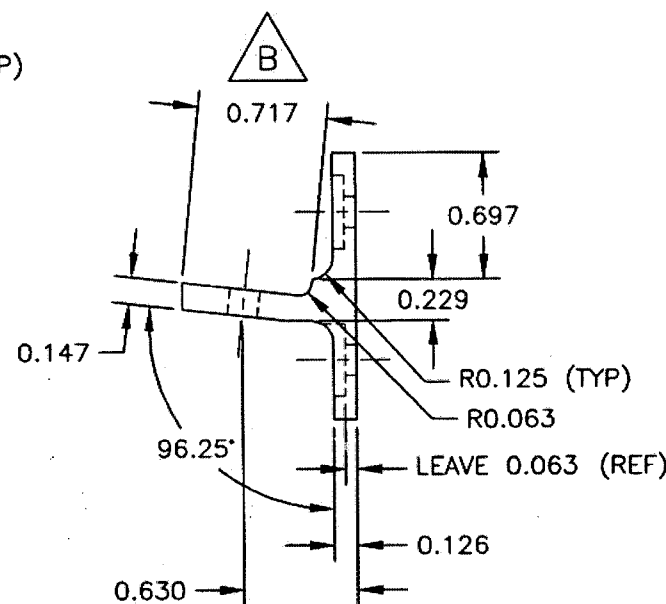
Rev	Date	Change	Revised by	Approved
A	07.10.30	New Issue	KJ/EC/DD	[Signature]

**DART**

COPIES TO 30

RELEASED  
99.01.09 KE

DESIGN	DRAWN BY	DRAWING NO.	REV. B
4E	4E	D2858	1 OF 1
CHECKED	APPROVED	TITLE	SCALE
UP	4E	HINGE BRACKET	1:1
DATE			
99.02.28			
A	98.12.14	NEW ISSUE	
B	99.02.28	0.717 WAS 0.667, 1.56 WAS 1.559	



ENGRAVE P/N CENTERED ON  
BASE 0.003 DEEP (0.010 MAX)

D2858-1 SHOWN  
D2858-2 OPPOSITE

MATERIAL: 6061-T6 ALUMINUM (QQ-A-250/11) OR (QQ-A-200/8) OR (QQ-A-225/8)  
FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
43304

8  
O5813  
(58-1BC01.NCC 99/04/13 8:14AM)  
N1 G90 G80 G40 G17  
N2 (CONTOUR BOTTOM PROFILE)  
N3 (T8 1/2 END CARB SHORT 0.136 )  
N4 T8 M6  
N5 M3 S4500  
N6 G0 G56 X5.242 Y-1.113 A0  
N7 G43 Z3. H8 M8  
N8 G4 P2000  
N9 G0 Z1.6056  
N10 G1 Z1.2196 F15.0  
N11 G3 X5.117 Y-0.988 I-0.125 J0  
N12 G2 X4.742 Y-0.613 I0 J0.375 F35.0  
N13 G1 Y0.613  
N14 G2 X5.117 Y0.988 I0.375 J0  
N15 G3 X5.242 Y1.113 I0 J0.125 F15.0  
N16 G0 Z3.  
N17 X4.13  
N18 Z1.6056  
N19 G1 Z1.2196 F15.0  
N20 G3 X4.255 Y0.988 I0.125 J0  
N21 G2 X4.63 Y0.613 I0 J-0.375 F35.0  
N22 G1 Y-0.613  
N23 G2 X4.255 Y-0.988 I-0.375 J0  
N24 G3 X4.13 Y-1.113 I0 J-0.125 F15.0  
N25 G0 Z3.  
N26 X1.959 Y1.113  
N27 Z1.6056  
N28 G1 Z1.2196 F15.0  
N29 G3 X2.084 Y0.988 I0.125 J0  
N30 G2 X2.459 Y0.613 I0 J-0.375 F35.0  
N31 G1 Y-0.613  
N32 G2 X2.084 Y-0.988 I-0.375 J0  
N33 G3 X1.959 Y-1.113 I0 J-0.125 F15.0  
N34 G0 Z3.  
N35 X3.071  
N36 Z1.6056  
N37 G1 Z1.2196 F15.0  
N38 G3 X2.946 Y-0.988 I-0.125 J0  
N39 G2 X2.571 Y-0.613 I0 J0.375 F35.0  
N40 G1 Y0.613  
N41 G2 X2.946 Y0.988 I0.375 J0  
N42 G3 X3.071 Y1.113 I0 J0.125 F15.0  
N43 G0 Z3.  
N44 (FACE CENTER SECTION FRONT)  
N45 (T9 1" END )  
N46 G0 G49 Z0 M9  
N47 T9 M6  
N48 G0 G90 G56 X0.1 Y1.9437 A-83.75 M3 S1500  
N49 G43 Z2.5 H9 M8  
N50 G4 P2000  
N51 G0 Z0.5996  
N52 G1 (Z0.3666) F15.0  
N53 X0.65  
N54 X6.551 Y1.9438 F12.0  
N55 X7.101 F15.0  
N56 G0 Z2.5  
N57 (FACE CENTER SECTION BACK)  
N58 (T11 1/2-1/16 RAD BULL)

New

N59 G0 G49 Z0 M9  
 N60 T14 M6  
 N61 G0 G90 G56 X6.826 Y-2.1171 A96.25 M3 S3200  
 N62 G43 Z3. H14 M8  
 N63 G4 P2000  
 N64 G0 Z0.0344  
 N65 G1 Z-0.2156 F15.0  
 N66 X6.551  
 N67 X0.65 F22.0  
 N68 X0.375 F15.0  
 N69 G0 Z3.  
 N70 X6.826 Y-1.9171  
 N71 Z0.0344  
 N72 G1 Z-0.2156 F15.0  
 N73 X6.551  
 N74 X0.65 F22.0  
 N75 X0.375 F15.0  
 N76 G0 Z3.  
 N77 X6.826 Y-1.7171  
 N78 Z0.0344  
 N79 G1 Z-0.2156 F15.0  
 N80 X6.551  
 N81 X0.65 F22.0  
 N82 X0.375 F15.0  
 N83 G0 Z3.  
 N84 (CENTER DRILL ALL HOLES)  
 N85 (T13 #4 CENTER DRILL 0.0625 DEEP)  
 N86 G0 G49 Z0 M9  
 N87 T13 M6  
 N88 G0 G90 G56 X1.855 Y1.8311 A-83.75 M3 S8000  
 N89 G43 Z4.5 H13 M8  
 N90 G4 P2000  
 N91 G81 X1.855 Y1.8311 Z0.3001 R0.5626 F15.0  
 N92 X4.026 R0.5626  
 N93 X6.197 R0.5626  
 N94 G80  
 N95 (DRILL 0.166)  
 N96 (T12 #19 DRILL 0.224 DEEP)  
 N97 G0 G49 Z0 M9  
 N98 T12 M6  
 N99 G0 G90 G56 X1.855 Y1.8311 A-83.75 M3 S8000  
 N100 G43 Z3. H12 M8  
 N101 G4 P2000  
 N102 G81 X1.855 Y1.8311 Z0.1386 R0.5626 F24.0  
 N103 X4.026 R0.5626  
 N104 X6.197 R0.5626  
 N105 G80  
 N106 (CONTOUR TOP PROFILE)  
 N107 (T6 1/2 END CARB)  
 N108 G0 G49 Z0 M9  
 N109 T8 M6  
 N110 G0 G90 G56 X-0.4671 Y1.7293 A-90. M3 S4500  
 N111 G43 Z3. H8 M8  
 N112 G4 P2000  
 N113 G0 Z0.4691  
 N114 G1 Z-0.2309 F15.0  
 N115 G3 X-0.3421 Y1.6043 I0.125 J0  
 N116 G1 X0.0203 F35.0  
 N117 X0.0933 Y1.5981  
 N118 X0.1711 Y1.5782  
 N119 X0.2295 Y1.5541



N120 X0.2988 Y1.5134  
N121 X0.3587 Y1.463  
N122 X0.3999 Y1.4187  
N123 G2 X0.5725 Y1.7358 I0.375 J0.0014  
N124 G1 X1.529 Y2.349  
N125 G2 X2.4589 Y1.8487 I0.326 J-0.5085  
N126 G1 X2.5709 Y1.4171  
N127 G2 X2.7435 Y1.7358 I0.375 J0.003  
N128 G1 X3.7 Y2.349  
N129 G2 X4.6299 Y1.8487 I0.326 J-0.5085  
N130 G1 X4.7419 Y1.4171  
N131 G2 X4.9145 Y1.7358 I0.375 J0.003  
N132 G1 X5.871 Y2.349  
N133 G2 X6.801 Y1.8405 I0.326 J-0.5085  
N134 G3 X6.926 Y1.7155 I0.125 J0 F15.0  
N135 G0 Z3.  
N136 M9  
N137 G0 G49 G90 Z0 A0  
N138 M99  
N139 G28 G91 Y0 Z0  
N140 M30

%

05813  
(58-1BC01.NCC 99/04/13 8:14AM)  
N1 G90 G80 G40 G17  
N2 (CONTOUR BOTTOM PROFILE)  
N3 (T8 1/2 END CARB SHORT 0.136 )  
N4 T8 M6  
N5 M3 S4500  
N6 G0 G56 X5.242 Y-1.113 A0  
N7 G43 Z3. H8 M8  
N8 G4 P2000  
N9 G0 Z1.6056  
N10 G1 Z1.2196 F15.0  
N11 G3 X5.117 Y-0.988 I-0.125 J0  
N12 G2 X4.742 Y-0.613 I0 J0.375 F35.0  
N13 G1 Y0.613  
N14 G2 X5.117 Y0.988 I0.375 J0  
N15 G3 X5.242 Y1.113 I0 J0.125 F15.0  
N16 G0 Z3.  
N17 X4.13  
N18 Z1.6056  
N19 G1 Z1.2196 F15.0  
N20 G3 X4.255 Y0.988 I0.125 J0  
N21 G2 X4.63 Y0.613 I0 J-0.375 F35.0  
N22 G1 Y-0.613  
N23 G2 X4.255 Y-0.988 I-0.375 J0  
N24 G3 X4.13 Y-1.113 I0 J-0.125 F15.0  
N25 G0 Z3.  
N26 X1.959 Y1.113  
N27 Z1.6056  
N28 G1 Z1.2196 F15.0  
N29 G3 X2.084 Y0.988 I0.125 J0  
N30 G2 X2.459 Y0.613 I0 J-0.375 F35.0  
N31 G1 Y-0.613  
N32 G2 X2.084 Y-0.988 I-0.375 J0  
N33 G3 X1.959 Y-1.113 I0 J-0.125 F15.0  
N34 G0 Z3.  
N35 X3.071  
N36 Z1.6056  
N37 G1 Z1.2196 F15.0  
N38 G3 X2.946 Y-0.988 I-0.125 J0  
N39 G2 X2.571 Y-0.613 I0 J0.375 F35.0  
N40 G1 Y0.613  
N41 G2 X2.946 Y0.988 I0.375 J0  
N42 G3 X3.071 Y1.113 I0 J0.125 F15.0  
N43 G0 Z3.  
N44 (FACE CENTER SECTION FRONT)  
N45 (T9 1" END )  
N46 G0 G49 Z0 M9  
N47 T9 M6  
N48 G0 G90 G56 X0.1 Y1.9437 A-83.75 M3 S1500  
N49 G43 Z2.5 H9 M8  
N50 G4 P2000  
N51 G0 Z0.5996  
N52 G1 Z0.3496 F15.0  
N53 X0.65  
N54 X6.551 Y1.9438 F12.0  
N55 X7.101 F15.0  
N56 G0 Z2.5  
N57 (FACE CENTER SECTION BACK)  
N58 (T11 1/2-1/16 RAD BULL)

0112

N120 X0.2988 Y1.5134  
N121 X0.3587 Y1.463  
N122 X0.3999 Y1.4187  
N123 G2 X0.5725 Y1.7358 I0.375 J0.0014  
N124 G1 X1.529 Y2.349  
N125 G2 X2.4589 Y1.8487 I0.326 J-0.5085  
N126 G1 X2.5709 Y1.4171  
N127 G2 X2.7435 Y1.7358 I0.375 J0.003  
N128 G1 X3.7 Y2.349  
N129 G2 X4.6299 Y1.8487 I0.326 J-0.5085  
N130 G1 X4.7419 Y1.4171  
N131 G2 X4.9145 Y1.7358 I0.375 J0.003  
N132 G1 X5.871 Y2.349  
N133 G2 X6.801 Y1.8405 I0.326 J-0.5085  
N134 G3 X6.926 Y1.7155 I0.125 J0 F15.0  
N135 G0 Z3.  
N136 M9  
N137 G0 G49 G90 Z0 A0  
N138 M99  
N139 G28 G91 Y0 Z0  
N140 M30

8